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# (12) United States Patent Euber

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### (54) ELEMENTAL NUTRITIONAL PRODUCTS

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(\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

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This patent is subject to a terminal dis-

claimer.

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## Related U.S. Application Data

- (62) Division of application No. 09/220,217, filed on Dec. 23, 1998, now Pat. No. 6,077,558.

### (56) References Cited

#### U.S. PATENT DOCUMENTS

4,414,238 A \* 11/1983 Schmidl 4,670,268 A \* 6/1987 Mahmoud 5,609,909 A \* 3/1997 Meyer et al. 6,077,558 A \* 6/2000 Euber

\* cited by examiner

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### (57) ABSTRACT

An emulsifying system for elemental diet compositions is provided that contains a protein source that may be a extensively hydrolyzed protein, free amino acids, shortchain peptides, or a mixture thereof; a lipid source; a carbohydrate source; and an emulsifying system comprising an ocentyl succinic anhydride modified starch and an acetylated monoglyceride emulsifier. The composition may be prepared as a powder or liquid nutritional composition for formulas prepared for infant, pediatric and adult populations in need of an elemental diet. The invention provides a commercially acceptable product in terms of desired stability and physical characteristics and is particularly useful for hypoallergenic infant formula preparations.

### 9 Claims, No Drawings